

Work Order ID 162212

Tuesday, May 30, 2017 8:13:30 AM

162212

Page 1

Item ID: D044-719-011L08

Accept

N900040100

Setup Start

NS1

Revision ID:

Stop

NS2

Item Name: R44 Cabin Floor Protectors - Clear

Start Date: 5/31/2017 Start Qty: 2.00

2

Cust Item ID:

Required Date: 6/7/2017 Req'd Qty: 2.00

2

Customer:

Reference:

DAS

21

Approvals:

Process Plan:

9-89

Date: MAY 30 2017

Tooling:

Date:

Run Start

NR1

QC:

Date:

SPC (Y/N):

Date:

Stop

NR2

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D3281	Rev F
DSI 9504	A

DAS
6
9-89

MAY 30 2017

100

Document Control

0.00

100

DOCUMENT CONTROL

DC

Memo

0.00

Doc.Control -USB or Paperwork

Photocopy bluefile and create labels per PPP D044-719-011L08 CHG001

2 DAS
27
9-89

JUN 13 2017

110

Pick Kit

0.00

110

Packaging

Memo

0.00

Packaging

2

DAS
6
9-89JUN 08 2017 DAS
28
9-89

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval 		
Description Work Order Deviation				Disposition					
							Completed By		
							Lead hand / Supervisor Approval Verification		
							QC / QA Coordinator Approval		

Root Cause			FAULT CATEGORY								
Environment	☐	No Re-verification	☐	Pressure/Forced	☐	Temperature/Cure	☐	Power Loss/Surge	☐	Positioned Wrong	☐
Design	☐	Operator	☐	Bending	☐	Set-up	☐	Folio/Program	☐	Outside Dimensions	☐
Doc/Data	☐	Offset/Setup	☐	Centre Not Concentric	☐	BOM/Route	☐	Grain	☐	Over/Under tolerance	☐
Equip/Tooling	☐	Supplier	☐	Cracks	☐	Broken/Damage/Defect	☐	Weld	☐	Part Incorrect	☐
Handling/Pre	☐	Training	☐	Crimp/Kink/Ripple/Wave	☐	Inspection Incomplete/Unqualified	☐	Wrong Stock Pulled	☐	Part Lost/Missing	☐
Material	☐	Use for Testing	☐	Cuffs	☐	Contamination	☐	Out of Sequence	☐	Part Moved	☐
Internal Transport	☐	Poor Information	☐	Crushing	☐	Countersink	☐	Off-set	☐	Drawing	☐
Tribal Knowledge	☐	Rushing	☐	Heat Treat	☐	Cut Too Short	☐	Mislabeled	☐	Finish	☐
LOA	☐	Product Improvement	☐	Wave/Twist in Tube	☐	Instructions Incomplete/Unclear	☐	Fit/Function	☐	Misread	☐
Substation	☐	Process Improvement	☐	Marks/Chatter	☐	Drill Holes	☐	Misaligned/off center	☐	Turning Sequence	☐
Past Expiry Date	☐	Manufacturing Process	☐	OTHER : _____							
Misidentified	☐	Past Due	☐								

Work Order ID 162212

Tuesday, May 30, 2017 8:13:30 AM

162212

Page 2

Item ID: D044-719-011L08 Accept ***N900040100*** Setup Start ***NS1***
Revision ID: Stop ***NS2***
Item Name: R44 Cabin Floor Protectors - Clear
Start Date: 5/31/2017 Start Qty: 2.00 ***2*** Cust Item ID:
Required Date: 6/7/2017 Req'd Qty: 2.00 ***2*** Customer:
Reference:

Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____ Run Start ***NR1***
QC: _____ Date: _____ SPC (Y/N): _____ Date: _____ Stop ***NR2***

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	---------	--------	--------------	---------------	---------------	------------------	----------------

120

QC4- 100% Inspect kits for completeness

0.00

120

QC

Memo

0.06

Quality Control

DAS
27
9-89

JUN 13 2017

130

Identify as per dwg & Stock Location: _____

0.00

130

Packaging

Memo

0.00

Packaging

Identify and pack for shipping as per PPP D044-719-011L08
Location: FG026DAS
27
9-89

JUN 13 2017

140

QC21- Final Inspection - Work Order Release

0.00

140

QC

Memo

0.20

Quality Control

DAS
21
9-89

JUN 14 2017

DAS
21
9-89

JUN 14 2017

DQA: _____ Date: _____

WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : ☐							

Picklist Print

Tuesday, May 30, 2017 8:13:33 AM

Page 1

Work Order ID: 162212

162212

Parent Item: D044-719-011L08

D044-719-011L08

Parent Item Name: R44 Cabin Floor Protectors - Clear

Start Date: 5/31/2017

Required Date: 6/7/2017

Start Qty: 2.00

Required Qty: 2.00

Comments:

IPP Rev:A04.09.17New IssueKJ/JLM

IPP Rev: B 04.02.02 Material change to Lexan 0.125" DL

IPP Rev C. 07.08.07 Thermoformed in house DL

IPP Rev D. 08.04.14 Material change to Lexan 0.093" DL

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D3281-1L08 *D3281-1L08* Floor Protector, Fwd LH		Manufactured	No			110	Each	2.0000	1	2			
									**			JUN 08 2017	DAS 6 9-89 DAS 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST427				2					
				159604				2					
D3281-2L08 *D3281-2L08* Floor Protector, Fwd RH		Manufactured	No			110	Each	2.0000	1	2			
									**			JUN 08 2017	DAS 6 9-89 DAS 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST427				2					
				159606				2					
D3281-3L08 *D3281-3L08* Floor Protector, Aft LH		Manufactured	No			110	Each	2.0000	1	2			
									**			JUN 08 2017	DAS 6 9-89 DAS 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST427				2					
				159608				2					
D3281-4L08 *D3281-4L08* Floor Protector, Aft RH		Manufactured	No			110	Each	2.0000	1	2			
									**			JUN 08 2017	DAS 6 9-89 DAS 28 9-89
				<u>Location</u>				<u>Loc Qty</u>		<u>Loc Code</u>			
				ST427				2					
				159611				2					

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐	OTHER : _____							

Picklist Print

Page 2

Tuesday, May 30, 2017 8:13:33 AM

Work Order ID: 162212

162212

Parent Item: D044-719-011L08

D044-719-011L08

Parent Item Name: R44 Cabin Floor Protectors - Clear

Start Date: 5/31/2017

Required Date: 6/7/2017

Start Qty: 2.00

Required Qty: 2.00

D2854-1-100

Manufactured No

110

Each

0.0000

8

16

**

JUN 08 2017

DAS
6 28
9-89 1-89

D2854-1-100

Velcro Strip, Looped

Cut 10" (8x) per kit

D2854-3-100

Manufactured No

110

Each

0.0000

8

16

**

JUN 08 2017

DAS
28
6
9-89

D2854-3-100

Hooked Velcro

Cut 10" (8x) per kit

DAS
27
9-89

Tuesday, May 30, 2017 8:13:33 AM

Shop Packet Print

Page 2

DQA: _____ Date: _____



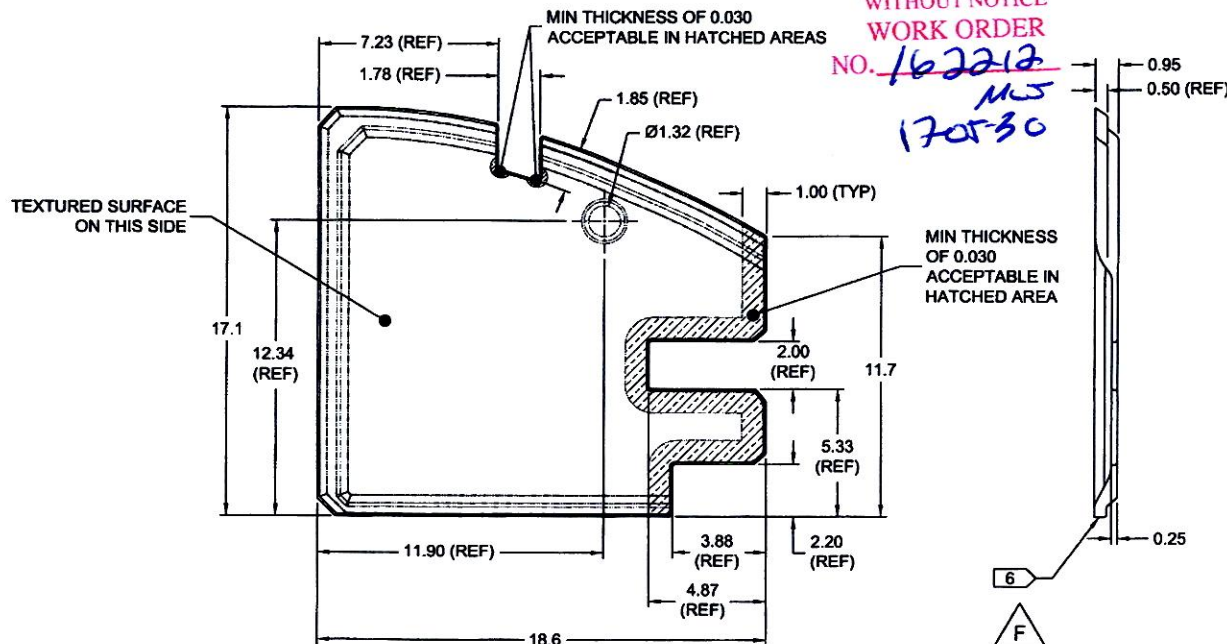
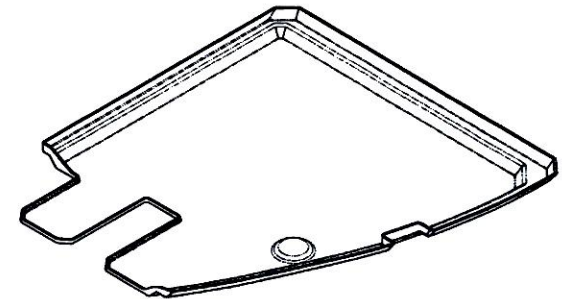
WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐					
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By	
								Lead hand / Supervisor Approval Verification	
								QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐ Design ☐ Doc/Data ☐ Equip/Tooling ☐ Handling/Pre ☐ Material ☐ Internal Transport ☐ Tribal Knowledge ☐ LOA ☐ Substation ☐ Past Expiry Date ☐ Misidentified ☐	No Re-verification ☐ Operator ☐ Offset/Setup ☐ Supplier ☐ Training ☐ Use for Testing ☐ Poor Information ☐ Rushing ☐ Product Improvement ☐ Process Improvement ☐ Manufacturing Process ☐ Past Due ☐	Pressure/Forced ☐ Bending ☐ Centre Not Concentric ☐ Cracks ☐ Crimp/Kink/Ripple/Wave ☐ Cuffs ☐ Crushing ☐ Heat Treat ☐ Wave/Twist in Tube ☐ Marks/Chatter ☐	Temperature/Cure ☐ Set-up ☐ BOM/Route ☐ Broken/Damage/Defect ☐ Inspection Incomplete/Unqualified ☐ Contamination ☐ Countersink ☐ Cut Too Short ☐ Instructions Incomplete/Unclear ☐ Drill Holes ☐	Power Loss/Surge ☐ Folio/Program ☐ Grain ☐ Weld ☐ Wrong Stock Pulled ☐ Out of Sequence ☐ Off-set ☐ Misabeled ☐ Fit/Function ☐ Misaligned/off center ☐	Positioned Wrong ☐ Outside Dimensions ☐ Over/Under tolerance ☐ Part Incorrect ☐ Part Lost/Missing ☐ Part Moved ☐ Drawing ☐ Finish ☐ Misread ☐ Turning Sequence ☐				
OTHER : ☐									

SHOP COPY
RETURN TO
ENGINEERING
UNCONTROLLED COPY
SUBJECT TO AMENDMENT
WITHOUT NOTICE
WORK ORDER
NO. 162212
MJS
170530



D3281-1 FLOOR PROTECTOR

NOTES:

- 1) MATERIAL: -1L02 = LEXAN F6006, BLACK No. 701, 0.093" THICK (MLEXS.093-F6006-02)
-1L08 = LEXAN 90318 (PROTECT-A-GLAZE), 0.118 THICK, 112-CLEAR (MLEXS.118-90318-08)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 MAX
- 6) IDENTIFICATION: IDENT WITH DART P/N "D3281-1Lxx" AND B/N PER QSI 044 6.4 ALONG PERIMETER OF PART AS SHOWN.
- 7) WEIGHT: D3281-1L02 = 0.95 lb D3281-1L08 = 1.13 lb
- 8) THERMOFORM WITH MOLD D3281-1T1 PER DART QSI 022; TRIM AS SHOWN
MINIMUM THICKNESS AFTER FORMING: 0.070" EXCEPT WHERE INDICATED

RELEASED
2010-11-25

REV.	DESCRIPTION	BY	DATE
F	NOTES UPDATED. FLAG NOTE 6 WAS 7 & RELOC. D.E.O. D3281-E-1 INC. DIM 17.0 WAS 17.1 (ZN B5-3, B6-4) & 17.7 WAS 17.8 (ZN C5-3, C6-4) REF CAR 10-21.	JPH	10.09.27
E	-3/4 NOW TRIMMED FLAT: RMV 0.25 BEVEL TO FACILITATE TRIMMING (ZN D6-3, D4-4)	CP	10.01.05
D	THICKNESS 0.093 WAS 0.125, MIN THICKNESS 0.070 WAS 0.080, P/N AND B/N ID WITH VIBRATING STYLUS (ZN A7-1, A7-2, A7-3, A7-4); D3281-4 NOW ON PAGE 4; CORRECT WEIGHTS (ZN A8-1, A8-2, A8-3, A8-4)	PH	08.03.28
C	UPDATE DIMS TO MATCH PARTS: COLOUR 701 WAS 700; GENERAL UPDATE	LE	07.10.09
B	NOW LEXAN; DIMS AS MANUFACTURED	CP	05.11.25
A	NEW ISSUE	CP	04.05.03
DESIGN	DRAWN	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA DRAWING NO. D3281 TITLE FLOOR PROTECTOR SCALE NTS COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	
CHECKED	MFG. APPR.		
APPROVED	DE APPR.		
DATE	10.09.27		

DQA: _____ Date: _____

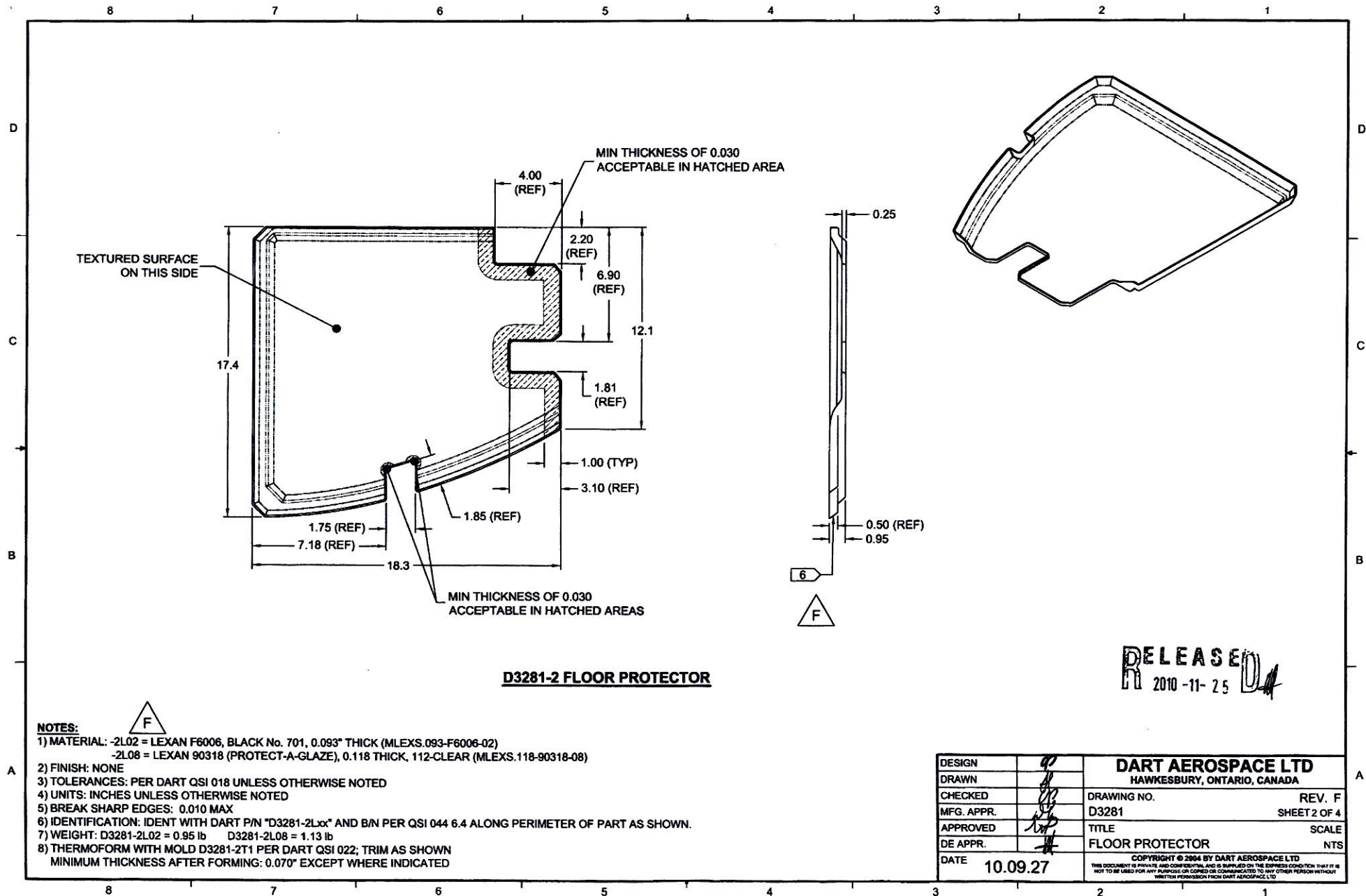


WORK ORDER NON-CONFORMANCE / UPDATE

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Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																



DQA: _____ Date: _____

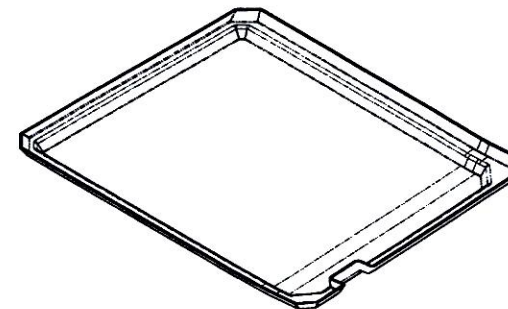
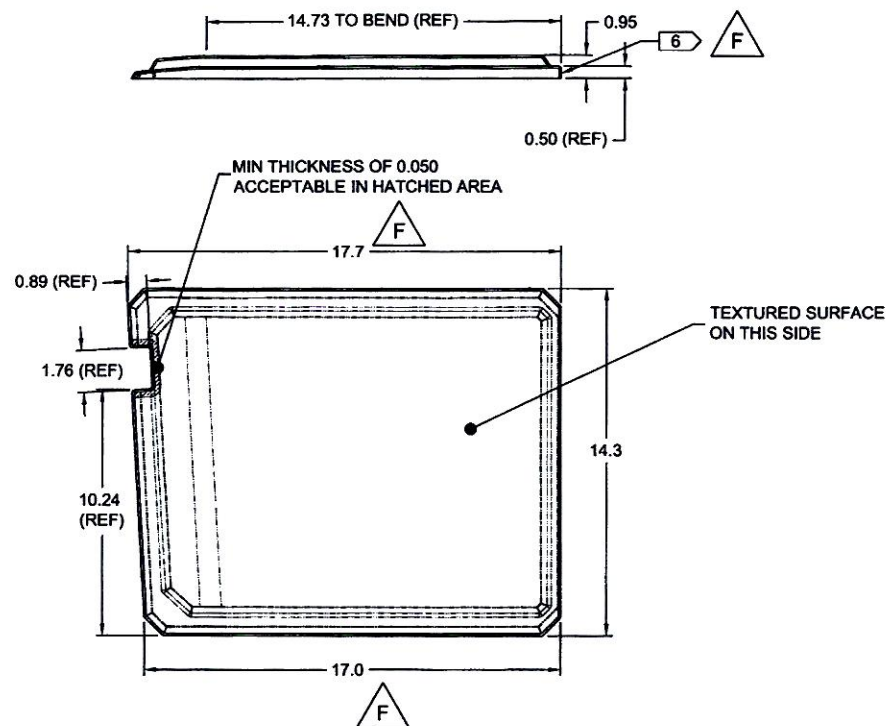


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Date :		Step #:		QTY Effective :			MRB (QSI042) Approval		
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval	
Root Cause		FAULT CATEGORY							
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐				
Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐				
Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐				
Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐				
Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐				
Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐				
Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐				
Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐				
LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐				
Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐				
Past Expiry Date ☐	Manufacturing Process ☐								
Misidentified ☐	Past Due ☐								
		OTHER : ☐							



D3281-3 FLOOR PROTECTOR

RELEASE
2010-11-25

NOTES:

- 1) MATERIAL: -3L02 = LEXAN F6006, BLACK No. 701, 0.093" THICK (MLEXS.093-F6006-02)
-3L08 = LEXAN 90318 (PROTECT-A-GLAZE), 0.118 THICK, 112-CLEAR (MLEXS.118-90318-08)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 MAX
- 6) IDENTIFICATION: IDENT WITH DART P/N "D3281-3Lxx" AND B/N PER QSI 044 6.4 ALONG PERIMETER OF PART AS SHOWN.
- 7) WEIGHT: D3281-3L02 = 0.87 lb D3281-3L08 = 1.05 lb
- 8) THERMOFORM WITH MOLD D3281-3T1 PER DART QSI 022; TRIM AS SHOWN
MINIMUM THICKNESS AFTER FORMING: 0.070" EXCEPT WHERE INDICATED

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D3281	SHEET 3 OF 4
APPROVED		TITLE	SCALE
DE APPR.		FLOOR PROTECTOR	NTS
DATE	10.09.27	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____

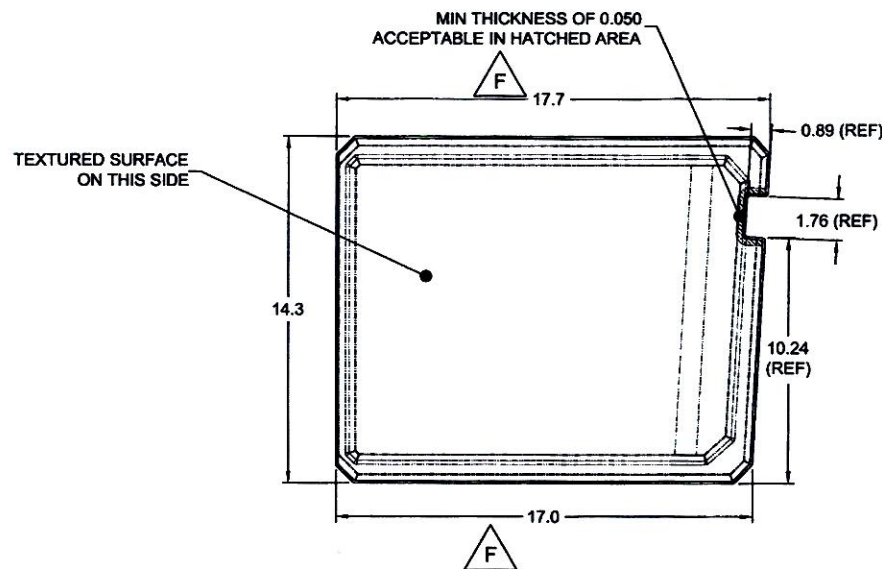
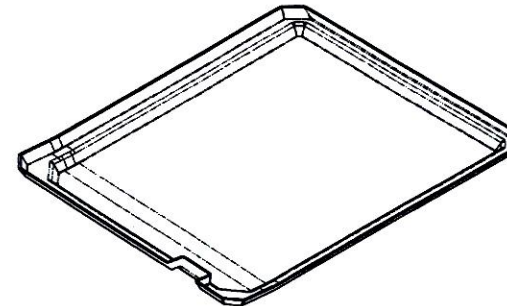
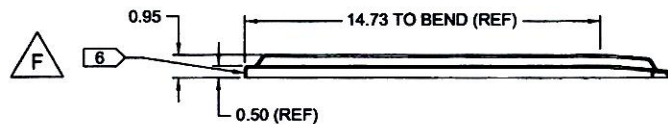
WORK ORDER NON-CONFORMANCE / UPDATE



QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
Date :		Step #:		QTY Effective :			MRB (QSI042) Approval																																																										
Description Work Order Deviation				Disposition				Completed By Lead hand / Supervisor Approval Verification QC / QA Coordinator Approval																																																									
Root Cause		FAULT CATEGORY																																																															
Environment ☐	No Re-verification ☐	Pressure/Forced ☐	Temperature/Cure ☐	Power Loss/Surge ☐	Positioned Wrong ☐	Design ☐	Operator ☐	Bending ☐	Set-up ☐	Folio/Program ☐	Outside Dimensions ☐	Doc/Data ☐	Offset/Setup ☐	Centre Not Concentric ☐	BOM/Route ☐	Grain ☐	Over/Under tolerance ☐	Equip/Tooling ☐	Supplier ☐	Cracks ☐	Broken/Damage/Defect ☐	Weld ☐	Part Incorrect ☐	Handling/Pre ☐	Training ☐	Crimp/Kink/Ripple/Wave ☐	Inspection Incomplete/Unqualified ☐	Wrong Stock Pulled ☐	Part Lost/Missing ☐	Material ☐	Use for Testing ☐	Cuffs ☐	Contamination ☐	Out of Sequence ☐	Part Moved ☐	Internal Transport ☐	Poor Information ☐	Crushing ☐	Countersink ☐	Off-set ☐	Drawing ☐	Tribal Knowledge ☐	Rushing ☐	Heat Treat ☐	Cut Too Short ☐	Mislabeled ☐	Finish ☐	LOA ☐	Product Improvement ☐	Wave/Twist in Tube ☐	Instructions Incomplete/Unclear ☐	Fit/Function ☐	Misread ☐	Substation ☐	Process Improvement ☐	Marks/Chatter ☐	Drill Holes ☐	Misaligned/off center ☐	Turning Sequence ☐	Past Expiry Date ☐	Manufacturing Process ☐	OTHER :			
Misidentified ☐	Past Due ☐																																																																



D3281-4 FLOOR PROTECTOR

D3281-4 NOTES:

- 1) MATERIAL: -4L02 = LEXAN F6006, BLACK No. 701, 0.093" THICK (MLEXS.093-F6006-02)
-4L08 = LEXAN 90318 (PROTECT-A-GLAZE), 0.118 THICK, 112-CLEAR (MLEXS.118-90318-08)
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.010 MAX
- 6) IDENTIFICATION: IDENTIFICATION: IDENT WITH DART P/N "D3281-4Lxx" AND B/N PER QSI 044 6.4 ALONG PERIMETER OF PART AS SHOWN.
- 7) WEIGHT: D3281-4L02 = 0.87 lb D3281-4L08 = 1.05 lb
- 8) THERMOFORM WITH MOLD D3281-4T1 PER DART QSI 022; TRIM AS SHOWN
MINIMUM THICKNESS AFTER FORMING: 0.070" EXCEPT WHERE INDICATED

RELEASE
2010-11-25

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. F
MFG. APPR.		D3281	SHEET 4 OF 4
APPROVED		TITLE	SCALE
DE APPR.		FLOOR PROTECTOR	NTS
DATE	10.09.27	COPYRIGHT © 2004 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D044-719 REV. A
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D044-719 REV. 0

REF TCCA STC: SH04-40

REF FAA STC: SR02051NY

REF EASA STC: EASA.IM.R.S.01075

PURPOSE:

To add the D044-719-011L08 Clear Cabin Floor Protectors. The -011L08 kit is similar to the existing -011 kit, however the plastic is transparent instead of solid black. The existing D044-719-011 kit will be re-identified as D044-719-011L02.

CHANGE:

The D044-719-011L08 Cabin Floor Protectors kit consists of four transparent plastic trays that are placed on the cabin floor to protect the carpets from damage. The -011L08 kit should be installed per the -011 kit of Installation Instructions IIN-D044-719 and maintained per Instructions for Continued Airworthiness ICA-D044-719. The parts list and weight & balance for the -011L08 kit is given below.

PARTS LIST

QTY -011L02	QTY -011L08	Part Number	Description
X		D044-719-011L02	Cabin Floor Protectors (Black)
	X	D044-719-011L08	Cabin Floor Protectors (Clear)
1		D3281-1L02	Floor Protector, Fwd LH, Black
	1	D3281-1L08	Floor Protector, Fwd LH, Clear
1		D3281-2L02	Floor Protector, Fwd RH, Black
	1	D3281-2L08	Floor Protector, Fwd RH, Clear
1		D3281-3L02	Floor Protector, Aft LH, Black
	1	D3281-3L08	Floor Protector, Aft LH, Clear
1		D3281-4L02	Floor Protector, Aft RH, Black
	1	D3281-4L08	Floor Protector, Aft RH, Clear
8	8	D2854-1-100	Looped Velcro Strip
8	8	D2854-3-100	Hooked Velcro Strip

WEIGHT AND BALANCE

Installation	Weight	Lateral		Longitudinal	
		Arm	Moment	Arm	Moment
D044-719-011L02	3.9 lb	0 in	0 in-lb	50 in	195 in-lb
Cabin Floor Protectors	1.8 kg	0 m	0 m-kg	1.27 m	2.3 m-kg
D044-719-011L08	4.4 lb	0 in	0 in-lb	50 in	220 in-lb
Cabin Floor Protectors	2.0 kg	0 m	0 m-kg	1.27 m	2.5 m-kg

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: 
D. SHEPHERD (DE # 02)
DATE: 10.02.24
CERT. NO.: SH04-40
ISSUE NO.: 1

A	NEW ISSUE	CP	10.02.24
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9504	SHEET 1 OF 1
APPROVED		TITLE	SCALE
DE APPR.		FLOOR PROTECTOR KIT, CLEAR	NTS
DATE	10.02.24	COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

DQA: _____ Date: _____



WORK ORDER NON-CONFORMANCE / UPDATE

QA Closed: _____ Date: _____

Work Order update only ☐

Work Order: _____ Part No. _____ NCR No. _____		DISPOSITION Rework ☐ Scrap ☐ Use-as-is ☐ Suspected Unapproved ☐		AGAINST DEPARTMENT/PROCESS Skid-tube ☐ Machining ☐ Thermoforming ☐ Large Fab ☐ Cross tube ☐ Small Fab ☐ Finishing ☐ Composite ☐ Water Jet ☐ Prod. Eng. Coord. ☐ Rec/Store/Packaging ☐ Supplier ☐ Engineering ☐ Quality ☐ Other ☐																																																													
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Misidentified ☐	Past Due ☐																																																																

REFERENCE ONLY

DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D044-719 REV. A
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D044-719 REV. 0
REF TCCA STC: SH04-40
REF FAA STC: SR02051NY
REF EASA STC: EASA.IM.R.S.01075

PURPOSE:

To add the D044-719-011L08 Clear Cabin Floor Protectors. The -011L08 kit is similar to the existing -011 kit, however the plastic is transparent instead of solid black. The existing D044-719-011 kit will be re-identified as D044-719-011L02.

CHANGE:

The D044-719-011L08 Cabin Floor Protectors kit consists of four transparent plastic trays that are placed on the cabin floor to protect the carpets from damage. The -011L08 kit should be installed per the -011 kit of Installation Instructions IIN-D044-719 and maintained per Instructions for Continued Airworthiness ICA-D044-719. The parts list and weight & balance for the -011L08 kit is given below.

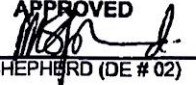
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	1	D3281-4L08	Floor Protector, Aft RH, Clear
8	8	D2854-1-100	Looped Velcro Strip
8	8	D2854-3-100	Hooked Velcro Strip

WEIGHT AND BALANCE

Installation	Weight	Lateral		Longitudinal	
		Arm	Moment	Arm	Moment
D044-719-011L02 Cabin Floor Protectors	3.9 lb 1.8 kg	0 in 0 m	0 in-lb 0 m-kg	50 in 1.27 m	195 in-lb 2.3 m-kg
D044-719-011L08 Cabin Floor Protectors	4.4 lb 2.0 kg	0 in 0 m	0 in-lb 0 m-kg	50 in 1.27 m	220 in-lb 2.5 m-kg

CANADA
DEPARTMENT OF TRANSPORT
AIRCRAFT CERTIFICATION
BRANCH
DAO # 01-O-01

APPROVED
BY: 
D. SHEPHERD (DE # 02)
DATE: 10.02.24
CERT. NO.: SH04-40
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A	NEW ISSUE	CP	10.02.24
REV.	DESCRIPTION	BY	DATE
DESIGN		DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN			
CHECKED		DRAWING NO. REV. A	
MFG. APPR.	N/A	DSI 9504 SHEET 1 OF 1	
APPROVED		TITLE SCALE	
DE APPR.		FLOOR PROTECTOR KIT, CLEAR NTS	
DATE 10.02.24		COPYRIGHT © 2010 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Work Order ID 162212

Tuesday, May 30, 2017 8:13:30 AM

162212

Page 1

Item ID: D044-719-011L08 Accept *N900040100* Setup Start *NS1*
 Revision ID: Stop *NS2*
 Item Name: R44 Cabin Floor Protectors - Clear
 Start Date: 5/31/2017 Start Qty: 2.00 *2* Cust Item ID:
 Required Date: 6/7/2017 Req'd Qty: 2.00 *2* Customer:
 Reference:

Approvals: Process Plan: Date: MAY 30 2017 Tooling: Date: Run Start *NR1*
 QC: Date: SPC (Y/N): Date: Stop *NR2*

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Tool ID	Tool #	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
Draw Nbr	Revision Nbr								
D3281	Rev F								
DSI 9504	A								
100	Document Control	0.00							
100	DOCUMENT CONTROL								
DC	Memo	0.00							
Doc Control -USB or Paperwork	Photocopy bluefile and create labels per PPP D044-719-011L08 CHG001								
110	Pick Kit	0.00							
110									
Packaging	Memo	0.00							
Packaging									

EB

2

MAY 31 2017



Transport Canada

Transports Canada

Department of Transport

Supplemental Type Certificate

This approval is issued to:

Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, Ontario
Canada K6A 1K7

Number: SH04-40**Issue No.:** 1**Approval Date:** August 18, 2004**Issue Date:** August 18, 2004**Responsible Office:**

Ontario

Aircraft/Engine Type or Model:

ROBINSON R44, R44 II

Canadian Type Certificate or Equivalent:

H-97

Description of Type Design Change:

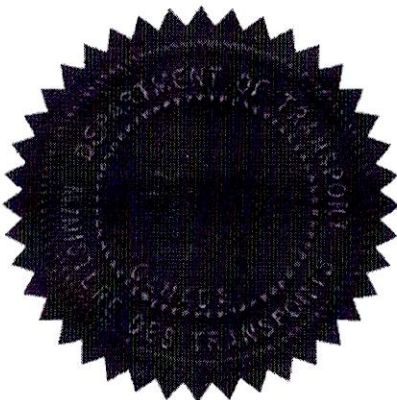
Cabin Floor Protectors

**Installation/Operating Data,
Required Equipment and Limitations:**

Installation of Cabin Floor Protectors must be done in accordance with Dart Aerospace Ltd Installation Instructions IIN-D044-719, Rev A, dated 04.06.10, or later approved revisions.

Maintenance of Cabin Floor Protectors must be done in accordance with Dart Aerospace Ltd Instructions For Continued Airworthiness ICA-D044-719, Rev 0, Transport Canada accepted 18 August 2004, or later Transport Canada accepted revisions.

— End —



Conditions: This approval is only applicable to the type/model of aeronautical product specified therein. Prior to incorporating this modification, the installer shall establish that the interrelationship between this change and any other modification(s) incorporated will not adversely affect the airworthiness of the modified product.

Alex Pompei
For Minister of Transport